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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,230	03/29/2001	Shigehisa Fujita	0505-0759P	2172

2292 7590 06/21/2004

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FALLS CHURCH, VA 22040-0747

EXAMINER

SHAAWAT, MUSSA

ART UNIT	PAPER NUMBER
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2128

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/820,230	Applicant(s) FUJITA, SHIGEHISA	
	Examiner Mussa A Shaawat	Art Unit 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>29 March 2001</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-16 are pending.

Drawings

2. Drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they not include the following reference character(s) mentioned in description: character "t" (P. 0043, line 6) is not indicated in drawings. Corrected drawing sheets are required in reply to Office action to avoid abandonment of application. Any amended replacement-drawing sheet should include all of figures appearing on immediate prior version of sheet, even if only one figure is being amended. Replacement sheet(s) should be labeled "Replacement Sheet" in page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of drawing figures. If examiner does not accept changes, applicant will be notified and informed of any required corrective action in next Office action. Objection to drawings will not be held in abeyance.

3. Drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in description: character "D5" in figure 10 is not mentioned in specifications. Corrected drawing sheets, or amendment to specification to add reference character(s) in description, are required in reply to Office action to avoid abandonment of application. Any amended replacement-drawing sheet should include all of figures appearing on immediate prior version of sheet, even if only one figure is being amended. Replacement sheet(s) should be labeled "Replacement Sheet" in page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of drawing figures. If examiner does not accept changes,

applicant will be notified and informed of any required corrective action in next Office action. Objection to drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of second paragraph of 35 U.S.C. 112:

specification shall conclude with one or more claims particularly pointing out and distinctly claiming subject matter which applicant regards as his invention.

4. Claim 3 recites limitation "said first analytic window, and said second analytic window" in lines 5 and 6. There is insufficient antecedent basis for this limitation in the claim. The phrase "said first analytic window and said second analytic window" is not present in the parent claim.

As per claim 6, Claim 6 recites limitation "said step of opening" in line 2. There is insufficient antecedent basis for this limitation in the claim.

As per claim 11, Claim 11 recites limitation "said first analytic window, and said second analytic window" in lines 5 and 6. There is insufficient antecedent basis for this limitation in the claim. The phrase "said first analytic window and said second analytic window" is not present in the parent claim.

As per claim 14, Claim 14 recites limitation "said means for opening" in line 2. There is insufficient antecedent basis for this limitation in the claim.

5. Claims 1-9 and 7-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 1-9, the applicant mentions "specification values inherent in the

indicated suspension" and "specification values at definition points inherent in the indicated suspension", it is not clear as to what "inherent" and "definition points inherent" means in the context of the claims and related teachings in the specification. This language appears indefinite to me.

As per claims 7-15, the applicant uses the term "interference" in the context of the claims and specification. It is not clear whether the term "interference" means the parts rub each other, or cause one part not to work correctly with the other part, or possibly that their interaction causes a reduced lifetime of parts, etc. This language appears indefinite to me.

6. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim Rejections - 35 USC § 102

The following is a quotation of appropriate paragraphs of 35 U.S.C. 102 that form basis for rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to date of application for patent in United States.

7. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Tang Patent no. (5,880,362), hereinafter referred to as **Tang**.

As per claim 1, Tang teaches a method of assisting in design of a vehicular suspension to generate a simulation model for a suspension using a CAD system, see **Tang** (col.3, lines 32-43), comprising steps of: indicating a suspension to be designed,

see **Tang** (col.3, lines 39-37); opening a specification value entering window for entering specification values inherent in indicated suspension; entering specification values at definition points inherent in indicated suspension in said specification value entering window; and generating a simulation model based on specification values at definition points, see **Tang** (col.3, lines 37-60).

As per claim 2, Tang teaches a method of assisting in design of a vehicular suspension according to claim 1, further comprising steps of: opening a first analytic window for displaying a first analytic model of selected suspension and definition points thereof; opening a second analytic window for displaying a second analytic model of selected suspension and definition points thereof; and entering specification values on at least one of said first analytic model and the second analytic model, see **Tang** (col.5, lines 14-18, and lines 59-65).

As per claims 3-4, limitations of claims 3 and 4 are similar to limitations of claim 2, therefore are rejected based upon same rationale.

As per claim 5, Tang teaches a method of assisting in design of a vehicular suspension according to claim 1, wherein step of indicating further comprises step of indicating drive system of a vehicle to which suspension is applied, see **Tang** (col.5, lines 37-65).

As per claim 6, Tang teaches a method of assisting in design of a vehicular suspension according to claim 5, wherein the step of opening further comprises steps of: entering three-dimensional coordinates as specification values at predetermined definition points of a three-dimensional model; and entering lengths and angles of

mechanisms of selected suspension as specification values, see **Tang** (col.3, lines 13-41, col.4, lines 37-60).

As per claim 7, Tang teaches a method of assisting in design of a vehicular suspension according to claim 2, wherein the step of opening first analytic window further comprises steps of: opening an interference analytic model; and analyzing whether there is an interference between various parts of selected suspension, see **Tang** (col.5, lines 22-28, lines 52-53).

As per claim 8, Tang teaches a method of assisting in design of a vehicular suspension according to claim 7, wherein the step of opening second analytic window further comprises steps of: opening a dynamic characteristic analytic model; and displaying compression and expansion strokes of front and rear wheels, and strokes of front and rear wheels when vehicle is occupied by passengers and not occupied by passengers, see **Tang** (col.3, lines 46-65, col.3, lines 65-67, col.4 lines 1-13, lines 48-60, col.5, lines 7-28).

As per claims 9-16, the limitations of claims 1-8 teach the same limitations of claims 9-16; therefore claims 9-16 are rejected based on same reasoning, supra.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Tang et al. (US 5,880,362) teaches a method and system for simulating vehicle and roadway interaction.

- Strumolo et al. (US 6,263,300) teaches a particle trajectory analysis system and method for vehicle design.
- Horiuchi et al. (US 5,942,673) teaches a vehicle testing system and testing method.
- Briggs et al. (US 4,952,152) teaches a real time vehicle simulation system.
- Gurke et al. (US 4,989,148) teaches an apparatus for a vehicular suspension system as a function of the roadway.
- Buchesky et al. (US 5,327,655) teaches a method and apparatus for vehicle alignment.
- Sasaki, (US 5,430,648) teaches a vehicular suspension system.
- Harara et al. (US 4,930,082) teaches a control apparatus for a vehicular suspension system.
- Tanaka et al. (US 5,347,457) teaches a method and apparatus for controlling a vehicle suspension.
- Raad et al. (US 5,430,647) teaches a method and apparatus for maintaining vehicular ride height.
- Kimura et al. (US 5,430,646) teaches a method for controlling a shock absorber applicable to automotive suspension.
- Hall et al. (US 6,651,037) teaches a method of optimizing design of an HVAC air-handling assembly for a climate control system.
- Hagelin (Pub. No. US 2003/0014230 A1) teaches a device and a method concerning the behavior of a vehicle.

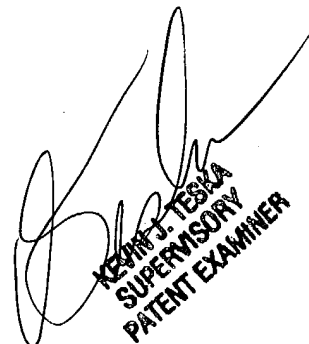
Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mussa A Shaawat whose telephone number is (703) 605-1372. The examiner can normally be reached on Monday-Friday (8:30am to 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin J Teska can be reached on 703) 305-9704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mussa Shaawat
Patent Examiner
June 09, 2004



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